

## EDITORIALS

# Smoking Cessation for Hospital Patients: An Opportunity to Increase the Reach of Effective Smoking Cessation Programs

Lori A. Bastian, MD, MPH

Departments of Internal Medicine and Obstetric/Gynecology, Duke University/Durham VA, Durham, NC, USA.

J Gen Intern Med 23(8):1286–7

DOI: 10.1007/s11606-008-0703-0

© Society of General Internal Medicine 2008

Smoking is the most preventable cause of morbidity and mortality, accounting for one in five deaths in the US.<sup>1</sup> More deaths are caused each year by tobacco use than by all deaths from AIDS, illegal drug use, alcohol use, motor vehicle injuries, suicides, and murders combined.<sup>2</sup> Tobacco use increases the risk for many cancers, including carcinoma of the lung, head and neck, esophagus, pancreas, kidney, bladder, and uterine cervix.<sup>3</sup> Likewise, smoking is a major risk factor for heart disease; 40% of cardiovascular deaths are attributable to smoking.<sup>4</sup>

Quitting smoking makes a difference. Even those patients who quit later in life gain benefits. Among smokers who quit at age 65 years, men gain on average 2 years of life and women gain 3 years.<sup>5</sup> Quitting smoking after a cancer diagnosis decreases the number and severity of complications as well as risk for tumor progression and the development of a second primary cancer.<sup>6</sup> Patients with cancer who stop smoking have improved survival and quality of life; this relationship holds true even for late-stage cancer patients.<sup>7,8</sup> Among patients with coronary heart disease, a meta-analysis has found a 36% reduction in mortality for those who quit smoking compared to those who continued to smoke.<sup>9</sup>

Despite the benefits to be gained from smoking cessation after a cancer or heart disease diagnosis, a substantial proportion of patients with these diagnoses continue to smoke.<sup>10</sup> Nicotine addiction is a key factor in maintenance of cigarette smoking among these patients. Although this addiction is difficult to overcome and this habit is hard to change, supportive counseling in conjunction with pharmacotherapy such as nicotine replacement therapy (NRT) is effective in promoting cessation among cancer patients.<sup>11</sup>

Unfortunately, effective smoking cessation aids such as counseling and NRT are generally underutilized.<sup>12</sup> Thorndike et al. compared practice patterns in treating tobacco addiction using data from the National Ambulatory Medical Care Survey between 1994–1996 and 2001–2003.<sup>13</sup> Physicians identified smoking status at 68% of visits in 2001–2003 compared to 65% in 1994–1996. Physicians counseled about smoking at 20% of smokers' visits in 2001–2003 compared with 22% in 1994–1996. Despite more availability of NRT products, prescribing was low (less than 2% of smokers' visits) in both time periods. There is much room for improvement to increase the reach of existing evidenced-based smoking cessation practices.

Hospitalization is a potential teachable moment for smoking cessation. McBride et al. used the term “teachable moment” (TM) to describe an individual's interpretation and judgments of an event that in turn determines whether the event will prompt behavior change.<sup>14</sup> The TM concept is drawn from theories of health behavior that suggest that awareness of health risk and perceived vulnerability to negative health outcomes are necessary to motivate behavior change. Based on the concept of the TM, an admission to the hospital can increase an individual's desire to change behavior, and this is a window of opportunity because hospital-based cessation interventions are effective.

In the current issue of *JGIM*, Koplan et al. utilized a pre-post study design to assess the effect of adding a brief tobacco-related standardized order template to an existing admission order system for General Medicine patients.<sup>15</sup> The objective of this tobacco order template was to systematically promote identification of smokers and provide treatment for inpatient smokers. The prevalence of current smoking among admissions with known smoking status was 12%. This minimal intervention increased the proportion of patients both referred for counseling (0.8 to 2.1%) and having NRT ordered (1.6 to 2.5%). The major strength of these findings is the potential to reach large numbers of patients with smoking cessation treatment. The main limitation is the lack of information on cessation outcomes.

Many physicians are reluctant to encourage their very ill patients to stop smoking for fear of increasing both the patient's guilt about their addiction and stress regarding their illness. However, by preempting the inherent difficulty of promoting smoking cessation, practitioners are telling their patients, “I have an intervention that will make your treatment work better and increase your survival time, but I think it would be too difficult for you, so let's not discuss it.” Aggressive smoking cessation treatment that involves a strong physician endorsement to try quitting and offering counseling plus pharmacotherapy should be offered for all patients, even those with end-stage disease having weeks or months to live.

When a patient is successful in smoking cessation, recent research suggests his/her quitting smoking can be contagious and have an impact on family and friends.<sup>16</sup> In a study by Christakis et al, smoking cessation by a spouse decreased a person's chances of smoking by 67%. One person's smoking behavior change (in a social network that includes family, friends, and co-workers) can make a difference for the other members in that network. Additionally, a child's hospitalization should also be considered an important opportunity to provide smoking parents with cessation services.

The study by Koplan et al. suggests that it is feasible for hospitals to implement a standardized tobacco order template

in order to systematically increase the provision of smoking cessation services and improve quality of care.<sup>15</sup> Yet, as the authors acknowledge, this approach is limited in that it relies on a physician's willingness and time to complete the orders. The next step is for the healthcare team to test standard protocols that can be initiated by nursing or administrative staff, with the goal of increasing the reach of effective smoking cessation programs.

---

**Acknowledgements:** Dr. Lori Bastian is supported by grants from the Department of Veterans Affairs, Health Services Research and Development (IIR-05-202) and NIH/National Cancer Institute (U01 CA92622).

**Corresponding Author:** Lori A. Bastian, MD, MPH, Departments of Internal Medicine and Obstetric/Gynecology, Duke University/Durham VA, 508 Fulton St (152), Durham, NC 27705, USA (e-mail: lori.bastian@duke.edu).

## REFERENCES

1. American Cancer Society. Cancer Facts and Figures 2005.
2. Centers for Disease Control and Prevention. Annual smoking-attributable mortality years of potential life lost and economic costs—United States, 1995–1999. Morbidity and Mortality Weekly Review. 2002; 51:300–3.
3. Yun YH, Jung KW, Bae JM, et al.. Cigarette smoking and cancer incidence risk in adult men: National Health Insurance Corporation Study. *Cancer Detect Prev*. 2005;29:15–24.
4. Miller M, Vogel R. The Practice of Coronary Disease Prevention. Baltimore, MD: Williams & Williams; 1996.
5. Taylor DH, Hasselblad V, Henley SJ, Thun MJ, Sloan FA. Benefits of smoking cessation for longevity. *Am J Public Health*. 2002;92:990–6.
6. Lerman C, Patterson F, Berrettini W. Treating tobacco dependence: state of the science and new directions. *J Clin Oncol*. 2005;23(2):311–23.
7. Garces YI, Yang P, Parkinson J, et al. The relationship between cigarette smoking and quality of life after lung cancer diagnosis. *Chest*. 2004;126(6):1733–41.
8. Ebbert JO, Williams BA, Sun Z, et al. Duration of smoking abstinence as a predictor for non-small-cell lung cancer survival in women. *Lung Cancer*. 2005;47(2):165–72, Feb.
9. Critchley J, Capewell S. Smoking cessation for the secondary prevention of coronary heart disease. *Cochrane Database Syst Rev*. 2004;(1): CD003041.
10. Gritz ER, Fingeret MC, Vidrine DJ, Lazev AB, Mehta NV, Reece GP. Successes and failures of the teachable moment: smoking cessation in cancer patients. *Cancer*. 2006;106(1):17–27.
11. Rigotti NA, Munafo MR, Stead LF. Interventions for smoking cessation in hospitalized patients. *Cochrane Database Syst Rev*. 2007;(3): CD001837.
12. National Institutes of Health state-of-the-science conference statement: tobacco use: prevention, cessation, and control. *Ann Intern Med*. 2006;145:839–44.
13. Thorndike AN, Regan S, Rigotti NA. The treatment of smoking by US physicians during ambulatory visits: 1994–2003. *Am J Public Health*. 2007;97:1878–83.
14. McBride CM, Emmons KM, Lipkus IM. Understanding the potential of teachable moments: the case of smoking cessation. *Health Educ Res*. 2003;18(2):156–70.
15. Koplan KE, Regan S, Goldszer RC, Schneider LI, Rigotti NA. A computerized aid to support smoking cessation treatment for hospital patients. *J Gen Int Med*. 2008. doi:10.1007/s11606-008-0610-4.
16. Christakis NA, Fowler JH. The collective dynamics of smoking in a large social network. *N Engl J Med*. 2008;358:2249–58.